"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

Certain features of...

under certain conditions. Tests of the tire tread rubber based on three types were performed on the IMI-3 (IMI-3) instrument and showed no significant differences in their wear-resistance. The dependence of the wear-resistance (in SKS-30-1 rubber) on the medium where the test is conducted is expressed to a lesser degree. This indicates a lesser intensity of the oxidation processes taking place in it during wear of the SKS-30-1 rubber as compared to the other varieties. The wear of SKS-30-1 rubber on a metallic grooved surface is much less. The results of service tests for both cars and trucks showed that tread rubber based on SKS-30-1 material exceeds the other materials in its wear-resistance, i.e. g., that of SKS-30ARKM and SKS-30AM. Tire treads based on SKS-30-1 rubber were tested on the road and under stationary conditions. The first batch of the truck and automobile tires were damaged completely owing to a breakdown of the protector joint after a 5 - 15 thousand km run. It is recommended removing the upper scorched layer of the joint when producing SKS-30-1 treads. The relationship of the joint stability in SKS-30-1 treads to the type of adhesive layer shows: 1) that adhesives based on NR sharply decrease the stability of the joint, 2) the adhesives based on BSK ensure a higher stability of the joints, 3) the greatest joint stability is obtained when using stable adhesives based on SKS-30-1.

Card 4/7

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A051/A129

One of the disadvantages of SKS-30-1 tires is said to be the lowered stability of the adhesion between the tread and the breaker based on NR. One of the outstanding features of the SKS-30-1 tire treads as compared to other types, such as butadiene-styrene rubber is the absence of tire damage due to a defect by cracking along the grooves of the tread. The authors conclude that the carboxyl-containing rubbers are promising for use in tread rubber for the automobile industry. There are 6 tables, 6 graphs, 1 photograph and 4 Soviet references.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promyshlennosti
(Scientific Research Institute of the Tire Industry)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

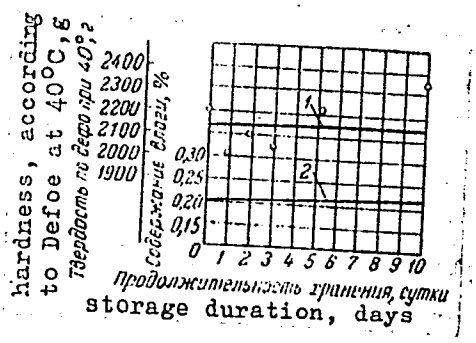

Figure 4:

Effect of the duration of storage of mother liquor mixture from SKS-30-1 on the content of moisture and tendency to scorching:

1 - hardness according to Defoe at 40°C;

2 - moisture content.

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Certain features of...

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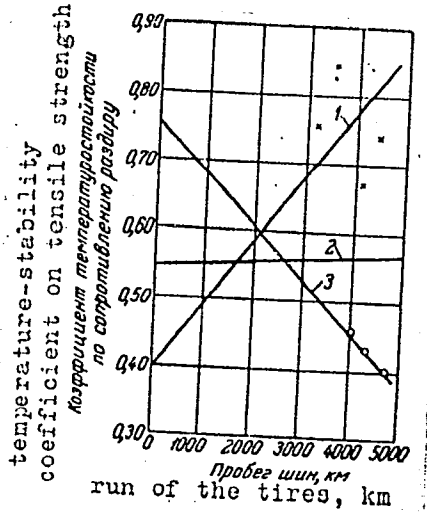
A051/A129



run of the tires, km

Figure 6:

Relationship of the temperature stability coefficient on tensile strength to the value of the run of the tires on stationary testing:

1 - rubber based on SKS-30-1,

2 - rubber based on NR,

3 - rubber based on SKS-30ARKM.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, G.N.; PRUZHANSKAYA, N.A.

Effect of the initial properties of rubber and carbon black on the strength of 100 per cent synthetic rubber tires under operating conditions. Kauch. i rez. 23 no.1:15-16 Ja '64. (MIRA 17:2)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, G. N.

"Gruzovye shiny iz sinteticheskikh elastomerov."

report submitted for 35th Intl Cong, Industrial Chemistry, Warsaw, 15-19 Sep 64.

Nauchno-issledovatel'skiy institut shinnoy promyshlennosti, Moscow.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

ACCESSION NR: AP4038905 S/0138/64/000/005/0001/0004

AUTHORS: Lyalin, A. A.; Shvarts, A. G.; Buyko, G. N.

TITLE: Application of calculated characteristic properties of rubber mixtures

SOURCE: Kauchuk i rezina, no. 5, 1964, 1-4

TOPIC TAGS: internal friction, rubber plasticity, impregnated mixture, activation energy, polymer, viscous flow, intermolecular interaction, vitrification temperature

ABSTRACT: The temperature dependence of the hardness index and modulus of internal friction in rubber, determined on a Cornfeld instrument, were investigated experimentally. Hardness measurements permit the determination of original rubber plasticity for a specific mixture, and friction measurements shed some light on the heat-generating characteristics of rubber. Both impregnated and nonimpregnated mixtures of various rubber bases: NK, SKI, butyl-300, SKS-30ARM and SKN-26 were investigated (properties of each specimen are given in tabular form). Measurements were made in the temperature range 20-100C, and the results are presented graphically as $\lg \eta$ versus $1/T$ (η - viscosity). The results agree closely with the Arrhenius formula

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

ACCESSION NR: AP4038905

$$\eta_T = \eta_0 \cdot e^{U/RT}$$

where η_T - viscosity at absolute temperature T, U - nominal activation energy of polymer in viscous flow, R - gas constant, η_0 - constant. The magnitude of U was was calculated for the hardness index of raw mixture specimens and for internal friction modulus. U is found to depend on the nature of the polymer, increasing (in general) with an increase in intermolecular interactions and increase in vitrification temperature. The initial plasticity of the rubber does not affect the temperature dependence of the mixture hardness. Orig. art. has: 5 figures, 2 tables, and 1 formula.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promy*shlennosti (Scientific Research Institute of the Tire Industry)

SUBMITTED: 00 DATE ACQ: 05Jun64 ENCL: 00

SUB CODE: MT NO REF SOV: 009 OTHER: 002

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BR

S/0138/64/000/004/0010/0015

ACCESSION NR: AP4034469

AUTHORS: Buyko, G. N.; Prushanskaya, N. A.

TITLE: The effect of the type of carbon black on vulcanization kinetics and structure of vulcanizates

SOURCE: Kauchuk i rezina, no. 4, 1964, 10-15

TOPIC TAGS: vulcanization, vulcanization kinetics, vulcanizate structure, vulcanizate cross link, vulcanization sulfur binding, butadiene styrene rubber, BSK rubber, natural rubber, carbon black filler, carbon black, rubber fatigue resistance, vulcanizate thermal resistance

ABSTRACT: The authors discuss the effect of various types of carbon black on the formation of cross-links, on the development of sulfur binding in butadiene-styrene and in natural rubber mixtures, and on the thermomechanical and thermo-oxidative resistance of the vulcanizates. The carbon blacks tested included the channel type, the furnace gas type PG-40, and the furnace types KhAF and FIF (from liquid hydrocarbons). The rubber-to-carbon black ratio was 100:50. The concentration of effective cross-links in the vulcanizates was calculated from their maximum swelling in metaxylene. It was found that at 153C the density of

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ACCESSION NR: AP4034469

the vulcanization network was higher in filled rubbers and that it depended on the nature of the carbon black (the KhAF and FIF induced cross-linking at a much higher rate than other types within the experimental period of up to 280 minutes). The amount of bound sulfur also increased with the progress of vulcanization. It was much higher in filled rubbers, except in those filled with channel carbon black. The carbon blacks from liquid hydrocarbons led in the process of sulfur binding. The filled vulcanizates showed a higher thermomechanical resistance than the nonfilled ones. It was found that carbon black had a deleterious effect on the thermooxidation of natural rubber while enhancing the stability of butadiene-styrene rubber in air at 130C. These experimental findings were confirmed by factory tests on tire rubbers. It was also determined that natural rubber containing channel black as filler. The authors discuss the reasons for the specific behavior of the various carbon blacks. Orig. art. has: 5 charts and 2 tables.

ASSOCIATION: Nauchno-issledovatel'skiy institut shinnoy promy*shlennosti (Scientific Research Institute of the Tire Industry)

Card 2/3

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

LYALIN, A.A.; SHVARTS, A.G.; BUYKO, G.N.

Use of the rated characteristics of rubber compound properties. Kauch. i rez. 23 no.5:1-4 My '64. (MIRA 17:9)

1. Nauchno-issledovatel'skiy institut shinnoy promyshlennosti.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

A L 11777-66 EWT(m)/EWP(j) RM

ACC NR: AP6001090 SOURCE CODE: UR/0138/65/000/012/0002/0005

AUTHOR: Yevstratov, V. F.; Buyko, G. N.; Arenzon, N. M.; Sakhnovskiy, N. L.; Karmanova, A. I.

ORG: Scientific Research Institute of the Tire Industry (Nauchno-issledovatel'skiy institut shinnoy promyshlennosti)

TITLE: Effect of the degree of filling with carbon black and softener on the properties of tread rubber from stereoregular butadiene rubbers

SOURCE: Kauchuk i rezina, no. 12, 1965, 2-5

TOPIC TAGS: butadiene styrene rubber, nitrile rubber, carbon, synthetic rubber, vehicle component, wear resistance

ABSTRACT: The effect of the degree of filling with carbon black and softener on the properties of vulcanizates and wear resistance of truck and passenger-car tires under various conditions of service was studied. Three groups of mixtures were studied: 100% SKD; SKD + NK (70:30), and SKD + BSK (europrene 1712) (1:1). KhAF carbon black and PN-6 (petroleum oil) softener were employed. The workability of the mixtures improved substantially with the degree of filling; this was particularly apparent in the case of 100% SKD. A satisfactory extrudability is achieved at a carbon black content of about 80 pts. by wt. and about 30—40 pts. by wt. of PN-6 softener. Good properties of SKD + NK and SKD + BSK mixtures were obtained at 60 pts. by wt. of carbon black and 15—18 pts. by wt. of the softener. On the basis of the results, tread rubber compositions were developed for truck and passenger-car

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L 11777-66

ACC NR: AP6001090

tires. Orig. art. has: 3 figures and 3 tables.

SUB CODE: 11 / SUBM DATE: none / ORIG REF: 002 / OTH REF: 008

HW

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, I.D.; IVANOVA, L.M., red.; VASIL'YEVA, L.P., tekhn.red.

[New achievements of the petroleum industry] Novoe v tekhnike neftianoi promyshlennosti; rekomendatel'nyi obzor literatury. Moskva, 1959. 14 p. (Novosti tekhniki, no.17) (MIRA 12:8)
(Petroleum industry)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, Iya Dmitriyevna; MOLCHANOVA, N.S., red.; VASIL'YEVA, L.P., tekhn.red.

[New developments in housing construction; survey of recommended literature] Novoe v zhilishchnom stroitel'stve; rekomendatel'nyi obzor literatury. Moskva, Gos.biblioteka im. V.I.Lenina, 1959. 22 p. (Novosti nauki i tekhniki, no.21) (MIRA 12:8)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

RESHETINSKIY, I.I.; BUYKO, I.D.

[Progressive technical improvements in the construction industry; catalog of recommended literature] Tekhnicheskii progress v stroitel'stve; rekomendatel'nyi ukazatel' literatury. Moskva, 1959. 36 p. (MIRA 12:11)

1. Moscow. TSentral'naya politekhnicheskaya biblioteka.
(Bibliography--Building)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, Iya Dmitriyevna; CHZHAO, Aleksandr Yevgen'yevich; CHERNYAK, A.Ya., red.; VASIL'YEVA, L.P., tekhn. red.

[New machinery and equipment in agriculture; recommended literature] Novaia tekhnika v sel'skom khoziaistve; rekomendatel'nyi obzor literatury. Moskva, Gos. biblioteka SSSR im. V.I.Lenina, 1961. 38 p. (Novosti nauki i tekhniki, no.26) (MIRA 14:8)
(Bibliography—Farm mechanization)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

USSR / Pharmacology, Toxicology. Cardiovascular Drugs. V

Abs Jour: Ref Zhur-Biol., No 9, 1958, 42375.

Author : Buyko, L. P.
*Inst : Not given.
Title : The Effect of Digitalis, Stronphantin and Mercusal on Blood Coaggulability in Patients with Circulatory Disorders.

Orig Pub: Vrachebn. delo, 1957, No 9, 919-922.

Abstract: Seventy-four patients, with various degrees of circulatory disorders, caused by heart attacks, cardiosclerosis and copulmonale were investigated. Prothrombin time (PT) was determined by the method of Borovski and Ravinski, coaggulation time (CT)- Sitkovski-Yegorov, Mas and Megrow, and the thrombocyte count by Fonno. In 10 patients, with circulatory failure, IIA (after the classification

* KAFEDRA TERAPII SANITARNO- GIGIYENICHESKOGO FAKUL'TETA RIYEVSKOGO MEDITSINSKOGO INSTITUTA.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

USSR / Pharmacology, Toxicology. Cardiovascular Drugs. V

Abs Jour: Ref Zhur-Biol., No 9, 1958, 42375.

Abstract: of Strazhesko and Vasilenko), treated with digitalis, strophantin and mercusal (I) a decrease of PT and CT was noted; particularly marked during therapy with cardiac glucosides in combination with I. In 48 patients, with circulatory failure, class IIB, the changes of CT indices were more marked during strophantin and I therapy. There were 15 patients with Class III circulatory failure. Eleven of those had varying PT values. Seven patients had only insignificant improvement after prolonged treatment (3-4 months). Eight patients died with manifestations of heart failure. PT and CT remained prolonged in 5 of those patients. In 3 patients a marked decrease of CT was noted, which was associated with a tendency to thrombus formation. The presence of thrombi and infarcts was

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

USSR/ Pharmacology, Toxicology. Cardiovascular Drugs. V

Abs Jour: Ref Zhur-Biol., No 9, 1958, 42375.

Abstract: confirmed by autopsy. Digitalis strophantin and I, while having a favorable effect on the circulation, also favor thrombo-embolic complications. It is recommended that these drugs be administered in combination with anticoaggulants. -- Ya. I. Zaydler

Card 3/3

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, M.A., inzh.

Cannery from unified standard units. Prom. stroi. 42 no.8:13-14 '65. (MIRA 18:9)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, Petr Mikhaylovich, 1895-1943; VINOGRADOVA, S.P., redaktor

[Clinical aspects and prevention of ruptures of the perineum in childbirth] Klinika i profilaktyka rozryviv promezyny pry rodakh. Kyiv, Derzh.med.vyd-vo URSR, 1951. 100 p. (Biblioteka likarya, 5)
(PERINEUM--RUPTURE) (MLRA 10:8)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, R.A.

Elecampane in Leningrad Province. Trudy Bot.inst.Ser.6 no.7: 342-344 '59. (MIRA 13:4)

1. Gosudarstvennyy pedagogicheskiy institut im. A.I.Gertsena, Leningrad.
(Leningrad--Gentians)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, R.A.

Biology of elecampane (Inula helenium L.) and the accumulation of essential oils in it. Bot.zhur. 44 no.12:1741-1747 D '59. (MIRA 13:4)

1. Botanicheskiy institut im. V.L.Komarova Akademii nauk SSSR, Leningrad.
(Elecampane) (Essences and essential oils)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, R. A., CAND BIO SCI, [redacted] ELECAMPANE (INULA HELE-
NIUM L.); ITS BIOLOGY AND ETHEREAL OIL CONTENT IN [redacted]
LENINGRADSKAYA OBLAST. LENINGRAD, 1960. (TARTU STATE UNIV).
(KL, 2-61, 203).

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BALABAS, G.M.; BUYKO, R.A.; GRASHCHENKOV, A.Ye.; SATSYPEROVA, I.F.; SANDINA, I.B.; SINITSKIY, V.S.; SOKOLOV, V.S.

[Introduction of medicinal, aromatic, and technical plants; results of the work of the introduction nursery of the Botanical Institute of the Academy of Sciences of the U.S.S.R. for 250 years] Introduktsiia lekarstvennykh, aromaticheskikh i tekhnicheskikh rastenii; itogi rabot introduktsionnogo pitomnika BIN AN SSSR za 250 let. Moskva, Nauka, 1965. 424 p. (MIRA 18:9)

1. Akademiya nauk SSSR. Botanicheskiy institut.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, R.A.

Dynamics of the accumulation of essential oils in elecampane roots. Trudy Len. khim.-farm. inst. 12:165-171 '61. (MIRA 15:3)

1. Botanicheskiy institut imeni V.L. Komarova AN SSSR, Leningrad.
(ELECAMPANE)
(ESSENCES AND ESSENTIAL OILS)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

Buyko, V. M.

84(7) PHASE I BOOK EXPLOITATION SOV/3240

Leningrad. Inzhenerno-ekonomicheskiy institut

Primeneniye rentgenovykh luchey k issledovaniyu materialov (Application of X-Rays in the Study of Materials) [Leningrad] Izd-vo Leningradskogo univ., 1959. 125 p. (Series: Its: Trudy, vyp. 28) Errata slip inserted. 2,000 copies printed.

Ed. (Title page): Yu. S. Terminasov, Professor, and T. N. Smirnova, Docent; Ed. (Inside book): N. I. Busorgina; Tech. Ed.: S. D. Vodolagina.

PURPOSE: This book is intended for specialists and students in educational institutions working in x-ray analysis.

COVERAGE: This book contains 12 studies prepared by the staff of the Department of Physics and of other departments of the Leningrad Engineering and Economics Institute in cooperation with industrial enterprises. The studies deal with the fatigue of metals and alloys, wear of metals due to friction, and the state of surface layers of metals subjected to preliminary hardening.

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The scientists applied the x-ray method of analysis to polycrystalline metals and alloys, to single crystals of metals, and to tempered and surface hardened steel. Residual stresses due to thermal treatment (Type I) and grinding (Type III) are the subject of a special study with a view to their role in the development of surface cold-hardening and their influence on the grinding process. Considerable attention is paid to the force-feed metal-cutting method of V. A. Kolesov, and to a method of surface hardening of metals by shot blasting. References follow each article.

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APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, V. M.

PHASE I BOOK EXPLOITATION SOV/3618

Akademiya nauk Kirgizskoy SSR

Izvestiya. Seriya yestestvennykh i tekhnicheskikh nauk, tom 1, vyp. 1 (News. Series on Natural and Technical Sciences, Vol 1, No. 1) Frunze, 1959. 164 p. 500 copies printed.

Ed.: F.T. Kashirin; Tech. Ed.: M.G. Anokhina.

PURPOSE: This book is intended for research scientists and teachers in institutes of higher education who may be interested in developments and research trends in various scientific fields.

COVERAGE: The book contains 12 articles by persons affiliated with the Academy of Sciences Kirgiz SSR on studies in physical chemistry, industrial chemistry, applied physics (blasting dynamics), electric power engineering, electronics, agronomy, medicine, pure mathematics, etc. A bibliography of 1957 publications of the Academy includes works on history, archeology, economics, linguistics, literature, geology, biological sciences (botany, zoology, medicine), and technology. No personalities are mentioned. References accompany most of the articles.

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S/139/59/000/05/016/026
E091/E191

AUTHORS: Buyko, V.M., Makogonov, V.Ye., Terminasov, Yu.S., and Toropov, A.M.

TITLE: X-ray Study of the Mechanism of Fatigue in Ferrous and Non-Ferrous Materials and Alloys (Mono- and Poly-Crystalline Specimens)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Fizika, 1959, Nr 5, pp 93-101 (USSR) (+ 1 plate)

ABSTRACT: The aim of this work is the elucidation of the following problems: 1) the reason for the broadening of interference lines in X-ray photographs of metals subjected to cyclic deformation; 2) whether the change in intensity of the X-ray lines can be used as a criterion for fatigue; 3) how does the fatigue process proceed in specimens of ferrous and non-ferrous alloys of different crystal sizes up to monocrystals, and 4) whether low temperature brings about changes in the structure of metals subjected to fatigue. The authors have submitted the following metals and alloys to fatigue tests: commercially pure iron (Armco iron), cuprite, aluminium, and brass. Brass specimens were tested first. These were cylindrical in shape. Various crystal sizes

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S/139/59/000/05/016/026
E091/E191

X-ray Study of the Mechanism of Fatigue in Ferrous and Non-Ferrous Materials and Alloys (Mono- and Poly-Crystalline Specimens)

were attained in these specimens by means of heat treatment. The latter were tested in a fatigue testing machine of the NU type at room temperature. One part of the specimens was tested in the annealed condition, the other part in a worked condition (work hardening was due to turning in a lathe). All tested specimens were subjected to deformation by bending to a definite degree at definite loads for different numbers of cycles. The second group of specimens was made from sheet material. The specimens were in the form of a uniform resistance beam or rectangular plate (Fig 1). One part of the specimens had a fine-grained structure (normal poly-crystalline specimens), the other part was submitted to preliminary working and subsequent recrystallisation which enabled crystals of different dimensions, from 10^{-3} mm to several cms, to be grown. For fatigue testing the authors built an apparatus in which specimens could be bent symmetrically. Its construction was based on the principle of constant deformation (Fig 2). In this

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68873

S/139/59/000/05/016/026
E091/E191

X-Ray Study of the Mechanism of Fatigue in Ferrous and Non-Ferrous Materials and Alloys (Mono- and Poly-Crystalline Specimens)

machine the specimens were tested at amplitudes of 1, 3, and 10 mm. Testing of all the above specimens was carried out at normal temperatures as well as at liquid nitrogen temperature. The specimens were X-rayed by the back reflection method as well as by the Laue method. The significant portion of the polycrystalline specimens was X-rayed in an ionisation apparatus of the URS-50I type. Specimens submitted to testing at liquid nitrogen temperature were subsequently X-rayed at normal temperature. In order to be able to predetermine the place of fatigue fracture of these specimens during testing, their middle portion had a different diameter from those portions of the specimen which were close to the grips of the machine. By means of heat treatment the following crystal sizes were attained in brass specimens: 10^{-4} mm, 10^{-3} and 10^{-2} mm (vacuum annealed specimens). X-ray investigations of these specimens were carried out by the ionisation method. The investigation of finely crystalline specimens (with crystal sizes of

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X-Ray Study of the Mechanism of Fatigue in Ferrous and Non-Ferrous Materials and Alloys (Mono- and Poly-Crystalline Specimens)

10^{-4} mm) led to the following results. In the testing of these specimens at cyclic stresses of 14, 18 and 22 kg/mm^2, and different numbers of cycles, no secondary effects (broadening of interference lines) were observed. X-ray investigation of specimens of the second group (with crystal sizes of 10-3 mm), tested at the same cyclic stresses, exhibited a broadening of interference lines within limits of up to 1 million cycles (Fig 3). The third group of specimens (with crystal sizes of 10^{-2} mm), tested under the same cycle stresses, exhibited a broadening of interference lines within the limits of testing up to 3 million cycles. The maximum broadening of the lines was 20% as compared with the initial width of a non-deformed specimen (Fig 4). Figs 5 and 6 show the dependence of the intensity of the (511) line on the number of cycles at a cycle stress of 22 kg/mm^2 for crystals of 10^{-2} and 10^{-4} cm, respectively. Fig 7 shows the distribution of points in the specimen which were X-rayed. Fig 8 shows a Laue-graph of Al before, and

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X-Ray Study of the Mechanism of Fatigue in Ferrous and Non-Ferrous Materials and Alloys (Mono- and Poly-Crystalline Specimens)

Fig 9 after, fracture. Fig 10 is a Laue-gram for Armco iron. The physical mechanism of fracture of coarsely crystalline metals is the same for all the different metals investigated in this work. Specimens of the metals investigated, which were submitted to fatigue tests at liquid nitrogen temperature and then X-rayed at normal temperature, exhibited stronger distortions in their crystal structure. A comparison of the results of the investigation of fine grained metals with that of coarse grained ones, which essentially represent monocrystals, shows that the development of secondary effects (fragmentation of crystal blocks and crystal distortions) depends on the initial condition of the metal and is not a structural characteristic of fatigue. The change in line intensity, reflecting the development of tertiary distortions, signals the approach of fracture of the specimen, but for the time being it cannot be used as a universal criterion for fatigue, and further work in this direction is required. However, there is no doubt that

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BUYKO, V.M.; TERMINASOV, Yu.S.

X-ray study of the fatigue mechanism in annealed and pre-stressed steel. Trudy LIEI no.28:5-24 '59. (MIRA 13:4)

(Steel--Fatigue) (Metallography)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, V.M.; TERMINASOV, Yu.S.

X-ray diffraction study of distortions of the crystalline structure of steels in fatigue tests. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 1 no.3:81-103 '59. (MIRA 14:9)
(X-ray crystallography) (Dislocations in crystals)
(Steel--Fatigue)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, V. M., Cand Phys-Math Sci -- (diss) "X-ray investigation of the deformation mechanism of crystalline steel under fatigue." Frunze, 1960. 11 pp; (Ministry of Higher Education, Kirgiz State Univ); 200 copies; price not given; (KL, 17-60, 138)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, V. (M.), TERMINOSOV, I.

"~~10-17~~3. X-Ray Investigation of Fatigue in Metals."

Inst. of Economic Engineers, Marot Street 27, Leningrad, USSR.

paper submitted for 5th Gen. Assembly, Sumposium on Lattice Defects, Intl. Union of Crystallography, Cambridge U.K. Aug 1960.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

S/148/60/000/003/007/018
A161/A029

AUTHORS: Buyko, V.M.; Terminasov, Yu.S.

TITLE: Roentgenographic Investigation of the Fatigue Mechanism of 35 KhNM Alloy Steel

PERIODICAL: Izvestiya vysshikh uchebnikh zavedeniy. - Chernaya metallurgiya, 1960, No. 3, pp. 73 - 77

TEXT: The mechanism of the fatigue process in carbon steel has been studied by roentgenographic means (Refs. 1, 2) but the recording of interference lines was not accurate enough for roentgenograms of alloy steel. The method used here included ionization and opened new possibilities. Chrome-nickel-molybdenum 35ХНМ (35KhNM) steel was chosen for investigation, and standard test specimens were prepared with a large-radius notch and one side of the notch was milled smooth. The beam of primary rays was aimed onto this surface. The specimens were annealed to remove work hardening. The fatigue limit of 35KhNM specimens was 39 kg/mm^2. The X-ray installation with ionization recording of the interference maxima was of the УРС-50 и (URS-50 i) type with a БСВИ (BSVI) tube with Fe-anode. Filtered K_α-radiation was used in all cases. The counter moved on a 160-mm radius circle during shooting. The X-ray beam was limited by two slit diaphragms placed between the

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Roentgenographic Investigation of the Fatigue Mechanism of 35 KhNM Alloy Steel

tube and the specimen and a third slit diaphragm with a filter was installed in front of the counter. A line (220) was fixed on the recording tape; the tape moved with constant velocity of 1,200 mm/hour. The width of interference lines was determined by the Stockes method (Ref. 3) and the size of blocks and micro-distortions of grid by harmonical analysis method (Ref. 4). The roentgenograms obtained from non-deformed specimens already had blurred interference lines characteristical for alloy steel and caused by some chemical non-homogeneity. It was concluded that the intensity of roentgen interferences can be considered a fatigue criterion, though the change of the line intensity at and above the fatigue limit is less sharp than in the case of carbon steel. There are 4 figures and 6 references: 5 Soviet, 1 English.

ASSOCIATION: Akademiya nauk Kirgizskoy SSR (Academy of Sciences of the Kirgizskaya SSR)

SUBMITTED: March 11, 1959

Card 2/2

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO, V.M.; TERMINASOV, Yu.S.

X-ray diffraction study of the mechanism of fatigue in brand 35KhNM alloy steel. Izv. AN Kir. SSR. Ser. est. i tekh. nauk 3 no.1:63-69 '61. (MIRA 14:7)
(Steel alloys--Fatigue) (X rays--Diffraction)

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L 41625-66 EWT(l)/EWT m)/T/EWP(t)/ETI IJP(c) GG/GD/JD/JG

ACC NR: AT6017938 (A) SOURCE CODE: UR/0000/65/000/000/0012/0018

AUTHOR: Alybakov, A.; Buyko, V. M.; Gubanova, V. A.; Shamyrkanov, Y.

ORG: none

TITLE: Growing of crystals of KCl and NaCl with a small number of dislocations

SOURCE: AN KirgSSR. Institut fiziki i matematiki. Vliyaniye primesey i strukturnykh defektov na svoystva nemetallicheskikh kristallov (The effect of impurities and structural defects on properties of nonmetallic crystals). Frunze, Izd-vo Ilim, 1965, 12 - 18

TOPIC TAGS: potassium chloride, sodium chloride, crystal growing, crystal dislocation, ionic crystal, crystal imperfection

ABSTRACT: This is an elaboration of a preliminary report by the authors (Kristallografiya v. 9, no. 6, p. 940, 1964) on the growing of both pure and doped ionic crystals with low dislocation density. The KCl and NaCl were grown in air by an improved Kiropoulos method in steps. The procedure consisted of periodically narrowing down the cross sections, by lifting the growing crystal and then using the narrow portion of the first step as a primer for the second step. The experiments were performed on plane-parallel plates cleaved from the grown crystals along the (100) planes. The dislocations were displayed by selective etching (75% glacial acetic acid and 25% concentrated nitric acid). The dislocation density was determined with a microscope and the microhardness was determined by an indentation method. Crystal imperfections

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were determined by an x-ray method. A table of the quantitative results is presented. The decrease in the dislocation density obtained by this method is attributed to the gradual decrease in the dislocation lines as the cross section of each step is decreased. With increasing number of steps, the density of the dislocations, the microhardness, and the disorientation of the crystal blocks all decrease. The authors thank L. M. Belyayev and G. F. Dobrzhanskiy for continuous interest and valuable advice, and I. L. Manuilova for participating in the experiment. Orig. art. has: 5 figures and 1 table.

SUB CODE: 20/ SUBM DATE: 22Oct65/ ORIG REF: 003/ OTH REF: 005

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BUYKO, YE.A.

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S/560/61/000/011/007/012
E027/E635

AUTHORS: Zhukov-Verezhnikov, N.N., Mayskiy, I.N., Yazdovskiy, V.I., Pekhov, A.P., Gyurdzhian, A.A. Nefed'yeva, N.P., Kapichnikov, M.M., Podoplelov, I.I., Rybakov, N.I., Klemparskaya, N.N., Klimov, V.Yu., Novikov, S.N., Novikova, I.S., Petrov, R.V., Sushko, N.G., Ugryumov, Ye.P., Fedorova, G.I., Zakharov, A.F., Vinogradova, ..., Chamova, K.G. and Buyko, Ye.A.

TITLE: The results of the first microbiological and cytological experiments in Space in Earth satellites

SOURCE: Akademiya nauk SSSR. Iskusstvennyye sputniki Zemli, no. 11. Moscow, 1961. Rezul'taty nauchnykh issledovaniy, provedennykh vo vremya poletov vtorogo i tret'yego kosmicheskikh korabley-sputnikov, 44 - 67

TEXT: The authors report the results of their investigations of biological objects which had been exposed to space conditions in satellite vehicles. The first part of the work was devoted to a study of the survival of cells of differing levels of organisation under the influence of radiation and other

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unfavourable factors, in comparison with control materials which remained in the laboratory over the same period. In experiments with bacteria 2ml. samples of suspensions of Escherichia coli, Aerobacter aerogenes, Staphylococcus aureus and Clostridium butyricum containing 500 million organisms or spores per ml. were sealed in ampoules, and exposed to a space flight of unstated duration; the number of viable individuals after the exposure did not differ significantly from the values for the control samples. A similar experiment was carried out with the T2 phage of E. coli and the 1321 phage of A. aerogenes, which were sent in the second satellite; again, no sigificant reduction in the titre of the phage preparations could be detected after return from space. Similar results were obtained with preparations of phage sent into space in the fourth and fifth satellites. Two bottles and six tubes of HeLa cells, some of which were saturated with oxygen, were exposed to space flight

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The results of the . ..

conditions, after it had first been shown that vibration and acceleration did not detach the cells from the glass. The cultures without oxygen appeared normal on return, whereas in those exposed to oxygen most of the cells had degenerated. Subculture showed that 90% of the cells, whether detached from or remaining on the glass, were dead; however, two tubes gave good growth, and the cells which grew up showed no abnormalities of morphology. No antigenic differences could be detected in the cells in anaphylaxis and desensitization experiments in guinea-pigs. In subsequent space flights fibroblast and human amnion cell cultures were studied, with similar results. Pieces of human and rabbit skin were also used. On August 12th 1960 two pieces of skin 2.5 x 3.5 cm. in size and 0.5 mm. thick were taken from a human donor, placed in Hanks solution and sent into space in the second satellite. On recovery they were regrafted on the original site in the donor and became firmly attached after seven days.

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Similar results were obtained with two other donors. An apparatus was devised for making a subculture in space, in order to study the ability of bacteria to multiply under space conditions. In experiments with Clostridium butylicum no deviations from the controls were observed. The second part of the work was devoted to a study of possible genetic effects brought about by exposure to space conditions, mainly by looking for the production of auxotrophic mutants and lysogeny in bacteria. The former were detected by inoculation on a layer of minimal medium which was then covered with an overlay of the same medium in order to fix the colonies. When the latter had grown up their position was noted and an overlay of complete medium was then put on, and the colonies which then grew up as a result of the diffusion of essentialnutrients were selected as auxotrophic mutants. No such mutants could be found in suspensions of Escherichia coli recovered from the second satellite. The experiments on the induction of lysogenic bacteria were carried out on a strain of E. coli lysogenized by a λ phage which had been exposed to cosmic

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radiation in the fifth satellite. Free phage particles were removed by adding phage antiserum; after the end of the latent period the action of the antiserum was cut short by diluting 1:100, streptomycin was added to inhibit the host organisms, and the mixture was plated out on the indicator strain in order to count the phage particles produced. The results obtained, considered in comparison with control experiments, provided no evidence of induction by cosmic radiation during a space flight of ninety minutes. No difference was observed in the plaque morphology. No changes could be detected in the chemical and physical properties of calf thymus deoxyribonucleic acid recovered after a space flight. The results as a whole indicate that no damage was suffered by isolated cells during a brief exposure to space conditions. There are 6 figures and 10 tables.

SUBMITTED: May 23, 1961

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

ZHUKOV-VEREZHNIKOV, N.N.; PEKHOV, A.P.; BUYKO, Ye.A.

Nature and significance of bacteriophage. Report No.3: Ultra-thin phage sections (methods and preliminary data). Biul. eksp. biol. i med. 52 no.10:78-79 O '61. (MIRA 15:1)

1. Iz otdela immunobiologii (zav. - deystvitel'nyy chlen AMN SSSR N.N.Zhukov-Verezhnikov) Instituta eksperimental'noy biologii (dir. - prof. I.N.Mayskiy) AMN SSSR, Moskva.
(BACTERIOPHAGE)

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BUYKO-ROGALEVICH, A. N.

2/4166 BUYKO-ROGALEVICH, A. N. Uvelicheniye nagruzki na zherebtsov v ruchnoy sluchke. Trudy Vsesoyuz. Nauch.-issled. In-TA konevodstva, VIP. 17, 1949, S. 113-22. Bibliogr: 8 Nazv.

SO: Letopis, No. 32, 1949.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKO-ROGALEVICH, A. N.

"Artificial Insemination and Breeding at Horse Breeding Stations," Konevodstvo, 22, No.2, 1952

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

S/862/62/002/000/004/029
A059/A126

AUTHORS: Buykov, M.B., Dukhin, S.S.

TITLE: Diffusion and thermal relaxation of the evaporating drop

SOURCE: Teplo- i massoperenos. t. 2: Teplo- i massoperenos pri fazovykh i khimicheskikh prevrashcheniyakh. Ed. by A.V. Lykov and B.M. Smol'skiy. Minsk, Izd-vo AN BSSR, 1962. 65 - 74

TEXT: In this paper, the most simple case of the thermal and diffusion relaxation of an evaporating drop is considered in a medium the temperature of which equals the initial temperature of the drop. The system of equations describing vapor diffusion and heat transfer inside and outside the drop is:

$$\frac{\partial z}{\partial \tau} = a\nabla^2 z,\ a = \frac{D}{x_2};$$

$$\frac{\partial y_1}{\partial \tau} = \beta\nabla^2 y_1,\ \beta = \frac{x_1}{x_2}; \qquad (1a)$$

$$\frac{\partial y_2}{\partial \tau} = \nabla^2 y_2$$

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where D is the coefficient of diffusion of water vapor in the gas surrounding the drop, and $\varkappa_1$ and $\varkappa_2$ are the temperature coefficients of thermal conductivity of the vapor-gas mixture and of the drop substance, respectively. The initial and boundary conditions are:

$$x \to \infty: z \to 0,\ y_1 \to 0;$$
$$x = 1: y_1 = y_2 = Y(\tau);\ z = Z_S[Y(\tau)];$$
$$\Gamma_0 \frac{\partial z}{\partial x} - \frac{\partial y_1}{\partial x} + \gamma \frac{\partial y_2}{\partial x} = 0;\ z = y_1 = y_2 = 0,\ t = 0, \tag{2a}$$

where

$$\Gamma_0 = \frac{LDu_0}{T_0 k_1};\ \gamma = \frac{k_2}{k_1};\ z = y_1 = y_2 = 0;\ \tau = 0. \tag{3a}$$

(u_0 being the initial density of the vapor, L the specific heat of vapor formation, and k_1 and k_2 the heat conduction coefficient of the vapor-gas mixture and of the substance of the drop, respectively). In a small temperature range, the density of the saturated vapors is related to temperature by the well-known formula:

$$u_S(T) = \frac{A}{T} \exp\left[-\frac{E}{T}\right]. \tag{4}$$

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where u_s is the density of the saturated vapors dependent only on temperature, $E = L\mu/R$, R being the gas constant and μ the molecular weight of the vapor. Thus, we obtain for Zs:

$$Z_S(Y) = 1 - \frac{u_S(T_0)}{u_0} \cdot \frac{\exp\left[\frac{E}{T_0}\frac{Y(\tau)}{1+Y(\tau)}\right]}{1+Y(\tau)}. \qquad (4a)$$

The equation obtained for the temperature of the drop surface is:

$$\Gamma_0 \int_0^{\tau} d\theta Z_S(\theta)\left(1 + \frac{1}{\sqrt{\pi a(\tau-\theta)}}\right) =$$

$$= \int_0^{\tau} d\theta Y(\theta)\left[1 + \frac{1}{\sqrt{\pi\beta(\tau-\theta)}} + 2\gamma\sum_{n=1}^{\infty}\exp(-\lambda_n^2\tau)\right]. \qquad (9)$$

The condition $\Gamma \ll \gamma$ means, according to mathematical derivations, that the amount of heat absorbed during evaporation is much less than the amount of heat which can be transferred to the respective volume by way of heat conduction. In

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this case, quasi-stationary diffusion and temperature fields can arise outside the drop, since the temperature coefficient of thermal conductivity of gases is greater than that of liquids. The stationary course of the processes sets in at $\tau \gg \tau_0$; the temperature of the drop is constant and equal to the so-called psychrometric temperature. If $\Gamma \gg \gamma$, i.e., if the heat absorbed during phase transition is greater than that which can be transferred by heat conduction, no quasi-stationary conditions are established; stationary conditions of evaporation set in at $\tau \gg \tau_1$. The time of complete relaxation is less in this case than in the previous one, when $\tau_0 > \tau$. This is due to the fact that high temperature and vapor density gradients appear. With $\Gamma \sim \gamma$, the establishment of quasi-stationary conditions is also impossible. Thus, the existence of quasi-stationary conditions is possible exclusively when $\Gamma \ll \gamma$, the executability of this condition for the same substance of the drop depends on temperature to a considerable degree. There is 1 figure.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR (Institute of General and Inorganic Chemistry of the AS UkrSSR)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

24(0)
AUTHOR: Chentsov, B. 907/53-67-4-7/7

TITLE: The Fifth All-Union Conference on the Physics of Low Temperatures (5-ye Vsesoyuznoye soveshchaniye po fizike nizkikh temperatur)

PERIODICAL: Uspekhi fizicheskikh nauk, 1959, Vol 67, Nr 4, pp 743-750 (USSR)

ABSTRACT: This Conference took place from October 27 to November 1 at Tbilisi. It was organized by the Otdeleniye fiziko-matematicheskikh nauk Akademii nauk SSSR (Department of Physico-mathematical Sciences of the Academy of Sciences, USSR), the Akademiya nauk Gruzinskoy SSR (Academy of Sciences, Georgian SSR), and the Tbilisskiy gosudarstvennyy universitet im. Stalina (Tbilisi State University imeni Stalin). The Conference was attended by about 500 specialists from Tbilisi, Moscow, Khar'kov, Kiyev, Leningrad, Sverdlovsk, and other cities as well as by a number of young Chinese scientists at present working in the USSR. About 50 lectures were delivered, of which two were experimental and the others theoretical. Reports on experimental investigations of superconductivity were delivered by Yu. V. Sharvin and V. P. Gantmakher (IFP). The former investigated the structure of the intermediate state in monocrystals of pure tin, the latter measured the thermal conductivity of different-shaped oriented cylindrical gallium samples at 0.1 - 4.2°K. L. A. Abrikosov, L. P. Gor'kov and I. M. Khalatnikov (ITF) theoretically investigated the behavior of a superconductor in the high-frequency field. V. L. Ginzburg and G. F. Zharkov (FIAN) dealt with the microscopical theory. Ginzburg discussed among other things the part played by fluctuations in phase transitions of the second kind. I. M. Lifshits (KhPTI) showed that it follows from the modern theory of superconductivity in consideration of the anisotropy of metals that, in principle, the existence of superconductors is possible which are superconductive only within a limited range of temperature (and not at all temperatures below the critical one). B. T. Geylikman and V. Z. Kresin (IAE) investigated the electron- and phonon thermal conductivity of superconductors by means of the microscopical theory at temperatures that are not very near absolute zero. V. V. Struzov and L. Z. Gurevich (FTI AN SSSR) spoke about the surface energy on the boundary between the superconductive and normal phases. D. E. Zakharov and Yu. A. Tserkovnikov (Matematicheskiy institut AN SSSR - Mathematics Institute AS USSR) dealt with the thermodynamics of the superconductive state (Frohlich-model). V. L. Polmachev (KIAT) investigated the problem of collective excitations in a superconductor. D. F. Shirkov (Ob"yedinennyy institut yadernykh issledovaniy - Joint Institute of Nuclear Research) spoke about consideration of Coulomb-interaction of electrons in semiconductors. The problem of consideration of the Coulomb interaction was discussed by Chen' Ch'un-hsien

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S/020/60/132/03/20/066
B014/B011

AUTHOR: Buykov, M. V.

TITLE: Generalization of the Method by Gor'kov for the Case of Electron - Phonon Interaction

PERIODICAL: Doklady Akademii nauk SSSR, 1960, Vol. 132, No. 3, pp. 561-564

TEXT: The theory of superconductivity is built up in the work under review on the basis of the real interaction of electrons with phonons regardless of the Coulomb interaction. No premises are considered regarding the coupling constant, and the case T = 0 is considered. The author proceeds from the equations of motion for the Heisenberg operators ψ and ψ^+ of the electron field as well as of those of the field of longitudinal phonons (1) and obtains equation system (3). It is shown next that the neglection made here corresponds to the substitution in the Dyson equation. Equations (5) are obtained next, from which the Gor'kov equations are derived by neglecting the mean energy of the electron transitions with respect to the mean energy of phonons. Much space is devoted to the study of

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Generalization of the Method by Gor'kov for the Case of Electron - - Phonon Interaction

S/020/60/132/03/20/066
B014/B011

the analytical continuation of two functions appearing in (5) $f = -i\hat{D}f/\Pi$ and $\sum = i\hat{D}G$. The author finally thanks L. E. Gurevich for his valuable advice. There are 1 figure, and 3 references, 2 of which are Soviet.

ASSOCIATION: Fiziko-tekhnicheskiy institut Akademii nauk SSSR (Institue of Physics and Technology of the Academy of Sciences, USSR)

PRESENTED: January 23, 1960, by A. F. Ioffe, Academician

SUBMITTED: December 17, 1959

VB

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

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29921
S/594/61/000/000/010/011
D234/D303

11,7350

AUTHORS: Buykov, N.V. and Dukhin, S.S.

TITLE: Theory of thermal and diffusional relaxation of an evaporating drop

SOURCE: Soveshchaniye po teplo- i massoobmenu. Minsk, 1961. Tezisy dokladov i soobshcheniy (Dopolneniye), 44-45

TEXT: Non-stationary evaporation or growth of a drop at rest (or in motion, but with small Pekle [Abstracter's note: Name transliterated] numbers) is considered, thermal processes being taken into account. The system of equations describing the process of evaporation consists of a diffusion equation for the density of vapor, a heat conduction equation for the regions outside and inside the drop. The boundary conditions are: Continuity of temperature, saturation of vapor and a thermal balance equation on the surface of the drop. At large distances from the drop the vapor density and temperature are supposed to be constant. All equations and boundary

Peclet

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Theory of thermal...

conditions, except that of thermal balance, are found to be satisfied after the introduction of new unknown functions and Duhamel's integral. The thermal balance equation is one for determining the temperature of the surface of the drop. In case of small subsaturations this equation can be linearized, and is then easily solved by applying the Laplace transformation. The analysis of the solution obtained leads to the following conclusions: If the quantity of heat absorbed in the phase transition at the surface of the drop is sufficiently small, the evaporation is quasi-stationary for $t \gg r_o^2/\varkappa_2$ (r_o being the radius of the drop and $\varkappa_2$ the temperature conductivity of the substance of the drop) and then the field of vapor density near the drop corresponds always to the instantaneous temperature of the surface of the drop. Since the heat conductivity of air is small, the time interval during which the evaporation is quasi-stationary is found to be rather large. If the quantity of absorbed heat is large, the transition from non-stationary regime to the stationary is essentially non-stationary. [Abstracter's

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Theory of thermal...

note: Complete translation

ASSOCIATION: IONKh AN USSR (IONKh AS UkrSSR)

Card 3/3

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKOV, M.V.

Isothermal distillation in a system of two fogs, one from water, the other from a weak solution. Dokl.AN SSSR 138 no.1:143-145 My-Je '61. (MIRA 14:4)

1. Institut obshchey i neorganicheskoy khimii AN USSR. Predstavlenc akademikom A.N.Frumkinym.
(Fog) (Distillation)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

Bulykov, M.V.

Report presented at the Conference on Heat and Transfer, Minsk, USSR, 5-10 June 61.

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270. V. I. Borovoy, I. K. Toma, Fusion of Bodies at High Supersonic Gas Flow.

271. A. J. Ede, The Heat Transfer Coefficient for Flow in a Pipe.

272. S. I. Britkova, L. S. Shtemenko, Experimental Investigation of Slip and Temperature Jump at Rarefied Air Flow Near the Solid Wall.

273. A. N. Devoine, On Some Results of the Investigation of Heat Transfer by Rarefied Gas at Natural Convection.

274. A. S. Ginsburg, O. I. Roslyakova, Heat Transfer at the Process of Radiative-Convective Baking by Infrared Rays

275. V. A. Baum, Influence of the Mass Transfer Coefficient on Water Temperature Distribution in the Assembly of the Water-Moderate Water-Cooled Reactor.

276. V. I. Subbotin, S. P. Kaznevsky, V. I. Sidorov, Investigation of Heat Removal by Liquid Metal Heat Agents on Models of Flat Heat Fuel Elements.

277. E. M. Fainzilber, Some Principal Problems of Criterial Methods of Heat Transfer Surface Investigation.

278. P. I. Povarnin, Application of the Thermodynamic Similarity Principles for Heat Transfer Calculations.

279. M. N. Medvedev, Generalization of the Newton Law of Cooling of Bodies.

280. V. K. Shchobertakov, Peculiarities of Heat Transfer Through the Wall with Longitudinal Fins at Surface Boiling.

281. A. V. Kas'yanov, Investigation of Convective Heat Transfer in Aluminum Pipes With Fins.

282. C. J. Schmeller, Some Problems of Heat and Mass Transfer Studied in The National Research Institute of Heat Engineering

283. I. T. Elperin, Intensification of Heat Transfer Between Gas and Solid Surface by Means of Intermediate Heat Transfer Fluid.

284. M. V. Bulkov, S. S. Dukhin, The Theory of Thermal and Diffusive Relaxation of an Evaporating Drop.

285. Z. L. Miropolsky, M. E. Shitsman, Critical Heat Flow at Water Boiling in Ducts.

286. I. I. Mostinsky, Application of the Corresponding State Law for Heat Transfer Calculation at Boiling of a Liquid.

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B152/B102

11.7350

AUTHORS: Buykov, M. V., Dukhin, S. S.

TITLE: Diffusional and thermal relaxation of a vaporizing drop

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 3, 1962, 80-87

TEXT: The non-steady growth or evaporation of an immobile drop is considered, and the relaxation times of the transition into the steady state are calculated. The fields of temperature and vapor density are determined for constant drop radius and equal temperatures of the drop and the surrounding. It is shown that the relaxation process may be quasi-steady, i.e. that variations of the fields of temperature and vapor density immediately follow variations of drop temperature. The equations of diffusion and heat conduction are:

$$\frac{\partial z}{\partial \tau} = \alpha \nabla^2 z;\ \frac{\partial y_1}{\partial \tau} = \beta \nabla^2 y_1;\ \frac{\partial y_2}{\partial \tau} = \nabla^2 y_2; \qquad (1.a),$$

$$\alpha = D/x_2;\ \beta = x_1/x_2,$$

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where $t = r_0\tau/\varkappa_2$; $r = xr_0$; $z(x,\tau) = (u_0 - u)/u_0$; $y_1(x,\tau) = (T_1 - T_0)/T_0$; $y_2(x,\tau) = (T_2 - T_0)T_0$. u - vapor density, T_1 and T_2 - temperatures outside and inside the drop, D - diffusion coefficient of the vapor in the surrounding gas, $\varkappa_1$ and $\varkappa_2$ - thermal diffusivity of the vapor gas mixture and the drop substance, r_0 - drop radius. The boundary and initial conditions are: $x \to \infty$ $y_1 \to 0$, $z \to 0$; and at $x = 1$

$$y_1 = y_2 = Y(\tau),\ z = Z_S[Y(\tau)],\ \Gamma_0\frac{\partial z}{\partial x} - \frac{\partial y_1}{\partial x} + \gamma\frac{\partial y_2}{\partial x} = 0, \qquad (2.a);$$

$$\Gamma_0 = LDu_0/T_0k_1;\ \gamma = k_1/k_2;$$

$$z = y_1 = y_2 = 0,\ \tau = 0. \qquad \text{and} \quad (3.a),$$

where L - evaporation heat, u_0 - vapor density in the infinity, k_1, k_2 - heat conductivities of the vapor - gas mixture and the drop substance. When assuming that Y is small compared with unity and introducing

$$f(\tau) = \Gamma_0 S_0(\tau + 2\sqrt{\tau/\pi a}); \qquad (11),$$

$$S_0 = \frac{u_0 - u_S(T_0)}{u_0};$$

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Diffusional and thermal relaxation ...

$$Z_S(Y) = S_0 - \frac{u_S(T_0)}{u_0}\left(\frac{E}{T_0} - 1\right)Y; \qquad (11.a),$$

$$K(\theta) = 1 + \Gamma + \frac{1 + \Gamma\sqrt{\beta/\alpha}}{\sqrt{\pi\beta\theta}} + 2\gamma\sum_{n=1}^{\infty}\exp[-\lambda_n^2\theta],$$

$$\Gamma = \Gamma_0\frac{u_S(T_0)}{u_0}\left(\frac{E}{T_0} - 1\right) \qquad (12),$$

where $E = L\mu/R$, R - gas constant, μ - atomic number of the vapor, $\lambda_n = \pi n$

$$Y(\tau) = Y_\infty\left[1 + \exp\left(-\frac{\tau}{\tau_0}\right) + \sum_{k=1}^{\infty}A_k\exp\left(-\frac{\tau}{\tau_k}\right) + \qquad (15)\right.$$

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$$+\int_0^\infty ds \exp(-s^2\tau)\,\varphi(s)\Big],$$

$$Y_\infty = \frac{\Gamma_0 S_0}{1+\Gamma};\ \tau_0 = \frac{\gamma}{3(1+\Gamma)} \gg 1;$$

$$\varphi(s) = \frac{2(1+\Gamma)}{\pi}\,\frac{\left[1-\sqrt{\frac{\beta}{\alpha}}(2+\Gamma)\right]\beta^{-1/2} - \frac{2\gamma}{\sqrt{\alpha}}(1-s\operatorname{ctg}s)}{(1+\Gamma-\gamma+\gamma s\operatorname{ctg}s)^2+\left(1+\Gamma\sqrt{\frac{\beta}{\alpha}}\right)^2\beta^{-1}s^2}$$

is obtained. For $\tau \gg 1$ is obtained

$$Y(\tau) \cong Y_\infty\left[1+\exp\left(-\frac{\tau}{\tau_0}\right)\right] \qquad (20),$$

$$Y(\tau) \cong Y_\infty\left[1+\exp\left(-\frac{\tau}{\tau_0}\right)+\frac{\varphi(0)}{2}\sqrt{\frac{\pi}{\tau}}\right]. \qquad (18),$$

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where

$$\varphi(0)=\frac{1-\sqrt{\beta/\alpha}(2+\Gamma)}{\sqrt{\beta}(1+\Gamma)}.$$

since

$$\tau_0>\tau\gg\tau_1=\frac{\pi}{4}\varphi^2(0), \qquad (19).$$

In this approximation $y_2(x,\tau)\doteq Y(\tau)$, i.e. the temperatures inside the drop and on its surface are equal. For $\Gamma\gg\gamma$ and $\tau\gg1$

$$Y(\tau)=Y_\infty\left[1+\frac{\varphi(0)}{2}\sqrt{\frac{\pi}{\tau}}\right] \qquad (25),$$

i.e. the temperature on the drop surface does not depend on time, and evaporation is steady. For $E\gg T_0$, $\Gamma/\gamma=E(dQ/dt)_{ev}/T_0/(dQ/dt)_{hc}$ where $(dQ/dt)_{ev}=LDu_s(T_0)/r_0^2$; $(dQ/dt)_{hc}=k_2T_0/r_0^2$. If $\Gamma\ll\gamma$, quasi-steady fields of diffusion and temperature can establish since the thermal diffusivity of the gases is greater than that of a fluid. Therefore, the period of

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time required for establishing the quasi-steady state outside the drop is shorter than inside. Stationary flow begins at $\tau \gg \tau_0$ and in this case the temperature of the drop equals the psychrometric one. When $\Gamma \gg \gamma$, a quasi-steady state is impossible since the heat absorbed during phase transition is greater than the heat supplied by heat conduction. At $\tau \gg \tau_1$ (and $\Gamma < \gamma$) evaporation becomes steady. In this case, the total relaxation time is less than in the above case because large gradients of temperature and vapor density will arise. Also when $\Gamma \sim \gamma$, no quasi-steady states occur. There are 7 references: 6 Soviet and 1 non-Soviet.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR, g. Kiyev (Institute of General and Inorganic Chemistry AS UkrSSR, Kiyev)

SUBMITTED: November 28, 1961

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

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B102/B104

11.7350

AUTHOR: Buykov, M. V.

TITLE: Diffusional and thermal relaxation of an evaporating drop

PERIODICAL: Inzhenerno-fizicheskiy zhurnal, v. 5, no. 4, 1962, 78 - 81

TEXT: The present paper is a continuation of Ref. 1 (M. V. Buykov, S. S. Dukhin, IFZh, no. 3, 1962) and considers the nonsteady evaporation (or growth) of a drop of a pure substance. The problem is a mathematical one: The equations

$$\left.\begin{aligned}\frac{\partial z(x,\tau)}{\partial \tau} &= \alpha \nabla^2 z(x,\tau), \quad \alpha = D/\varkappa_2\\ \frac{\partial y_1(x,\tau)}{\partial \tau} &= \beta \nabla^2 y_1(x,\tau), \quad \beta = \varkappa_1/\varkappa_2\\ \frac{\partial y_2(x,\tau)}{\partial \tau} &= \nabla^2 y_2(x,\tau)\end{aligned}\right\} \quad (1),$$

$$t = \tau r_0^2/\varkappa_2, \; r = xr_0, \; y_1(x,\tau) = (T_1 - T_\infty)/T_\infty,$$

$$y_2(x,\tau) = (T_2 - T_0)/T_0, \; z(x,\tau) = (u_0 - u)/u_0;$$

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with suitable initial and boundary conditions, are reduced to one equation for the boundary temperature of the drop

$$f(\tau) = \int_0^\tau d\theta\, K(\tau - \theta)\, Y(\theta). \tag{6}$$

$$f(\tau) = \Gamma_0 S_0 \left(\tau + 2\sqrt{\frac{\tau}{\pi\alpha}} \right) + (1-\mu) \left(\tau + 2\sqrt{\frac{\tau}{\pi\beta}} \right); \tag{7}$$

$$K(\theta) = \mu + \Gamma + \frac{\mu + \Gamma\sqrt{\frac{\beta}{\alpha}}}{\sqrt{\pi\beta\theta}} + 2\gamma \sum_{n=1}^{\infty} \exp(-\lambda_n^2 \theta) \tag{8}.$$

with the aid of a Duhamel integral. The solution of Eq. (6),

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$$Y(0)=\frac{1}{2\pi i}\int_{\sigma-i\infty}^{\sigma+i\infty}\frac{ds}{s}\times$$

$$\times\exp(s\tau)\frac{\Gamma_0 S_0\left(1+2\sqrt{\frac{s}{\alpha}}\right)+(1-\mu)\left(1+2\sqrt{\frac{s}{\beta}}\right)}{\mu+\Gamma-\gamma+\left(\mu+\Gamma\sqrt{\frac{\beta}{\alpha}}\right)\sqrt{\frac{s}{\beta}}+\gamma\sqrt{s}\operatorname{cth}\sqrt{s}} \qquad (9)$$

is analyzed. It is shown that the asymptotic behavior of the surface temperature of the drop depends for large periods of time on the amount of heat absorbed during evaporation. If it is large, quasisteady evaporation is impossible; if it is small, quasisteady evaporation may occur. There are 2 non-Soviet references.

ASSOCIATION: Institut obshchey i neorganicheskoy khimii AN USSR, g. Kiyev
(Institute of General and Inorganic Chemistry AS UkrSSR, Kiyev)

SUBMITTED: January 3, 1961

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYKOV, M.V.; DEKHTYAR, M.I.; DUKHIN, S.S.

Theory of the large drop part of the spectrum of cloud drops. Izv.AN SSSR.Ser.geofiz. no.4:637-647 Ap '63. (MIRA 16:4)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.
(Clouds--Spectra)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

DUKHIN, S.S.; BUYKOV, M.V.

Theory of the dynamic adsorption layer of moving spherical particles. Part 1: Dynamic adsorption layer of a solid spherical particle with Reynolds number $Re \leqslant 1$ and Peclet number $Pe \gg 1$. Zhur. fiz. khim. 38 no.12:3011-3013 D '64. (MIRA 18:2)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

SHULEPOV, Yu.V.; BUYKOV, M.V.

Theory of dissipation of stratus clouds in a nonturbulen atmosphere in the presence of descending vertical motions. Izv. AN SSSR. Fiz. atm. i okeana 1 no.3:248-257 Mr '65.

(MIRA 18:6)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

L 20320-66 EWT(1)/FCC GW

ACCESSION NR: AT5017681 UR/2599/65/000/047/0003/0016

AUTHOR: Buykov, M. V.

TITLE: Modification of the spectrum of cloud droplets by introduction of particles strongly absorbing solar radiation

SOURCE: Kiyev. Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut. Trudy, no. 47, 1965. Voprosy aktivnykh vozdeystviy na atmosfernyye protsessy (Problems of active influences on atmospheric processes), 3-16

TOPIC TAGS: cloud, solar radiation, distillation, evaporation

ABSTRACT: It is pointed out that an entire cloud mass becomes heated during distillation that leads to gradual enlargement of cloud droplets. This heating results from transfer by means of molecular conductivity of absorbed radiation on droplets to the surrounding medium. This process of enlarging cloud droplets by repeated distillation in a mixture of cloud droplets and droplets containing a reagent whose presence increases the absorption of short-wave radiation by such droplets is discussed by the author. It is shown that, when proper assumptions are made relative to details in the process, a substantial enlargement of the cloud droplets is to be expected within a few days after the process becomes

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ACCESSION NR: AT5017681

effective. The elevation of temperature within the cloud due to absorption of short-wave radiation is also determined. It is shown that when a substantial change in the spectrum of the drops is attained, the elevation of temperature leads to evaporation of a great part of the cloud moisture, and this may cuase the clouds to disappear. Orig. art. has: 7 tables and 3 formulas.

ASSOCIATION: Ukrainskiy nauchno-issledovatel'skiy gidrometeorologicheskiy institut (Ukrainian Scientific Research Hydrometeorological Institute)

SUBMITTED: 00 ENCL: 00 SUB CODE: ES, AA

NO REF SOV: 001 OTHER: 001

Card 2/2

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

SHULEPOV, Yu.V.; BUYKOV, M.V.

Dissipation of stratus cloudiness in a turbulent atmosphere. Trudy UkrNIGMI no.48:3-12 '65.

Solution to instability in an unstably stratified atmosphere. Ibid.:39-44 (MIRA 18:8)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

DEKHTYAR, M.I.; BUYKOV, M.V.

Fluctuations of the number of large drops in stratified clouds.
Trudy UkrNIGMI no.48:21-38 '65.

(MIRA 18:8)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

DUKHIN, S.S.; BUYKOV, M.V.

The theory of the dynamic adsorption layer of moving spherical particles. Part 2. Zhur. fiz. khim. 39 no.4:913-920 Ap '65. (MIRA 19:1)

1. Institut obshchey i neorganicheskoy khimii AN UkrSSR.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYLENKO, N.V. (postantsiya Ramon' Voronezhskoy oblasti)

Principles of practical application in the secondary school. Khim.v shkole 10 no.3:71-73 My-Je '56. (MLRA 9:8)
(Chemistry--Study and teaching) (Industrial tours)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYLENKO, N.V. (poselok Ramon' Voronezhskoy oblasti).

Experience in industrial training of students in plant chemical laboratories. Khim. v shkole 13 no.1:59-63 Ja-F '58. (MIRA 10:12)
(Chemistry, Technical--Study and teaching)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYLENKO, N.V. (pos.Ramon' Voronezhskoy obl.)

Training of students in factory shops and laboratories. Khim. v shkole 14 no.2:84-86 Mr-Ap '59. (MIRA 12:4)
(Chemistry, Technical--Study and teaching)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

LYAMZIN, I.T.; CHEREPANOV, V.N.; MATVEYEVA, S.P.; YEGOROVA, A.S.; BUYLENKO, V.I.

Destruction of alkali in the presence of sodium chlorate contained in the caustic soda solution. Khim. volok. no.3:57 '65. (MIRA 18:7)

1. Ryazanskiy kombinat iskusstvennogo volokna.

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

USSR/Cultivated Plants - Grains M

Abs Jour : Ref Zhur Biol., No 12, 1958, 53547

Author : Buylin, D.P., Varfolomeyeva, A.M.

Inst : Kuybyshevsk State Agricultural Testing Station

Title : Bezenchukskaya 98 Spring Wheat

Orig Pub : Byul. nauchno-tekhn. inform. Kuypyshevsk. (Bezenchuksk). gos. s.-kh. opytn. st., 1957, 1, 31-32

Abstract : This variety was developed for irrigation farming. It is characterized by a large number of spikelets on the spike, good grain yield (5-6 grains to a spikelet), resistance to damping off and to the attacks of fungus diseases. It is also distinguished by a high (18.8%) protein nitrogen content, and by good milling and bread baking qualities. With regard to yield, it exceeded Lyutestsens by 8.3 centners/ha and Gordeiforme by 5.4 centners/ha.

Card 1/1

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

AYZENFEL'D, TS.B.; BUYLINA, L.O.; LEVINA, L.A.; KRASIL'SHCHIKOV, A.I.

Effect of paint-and-varnish coatings on the electrochemical behavior of iron. Zhur. prikl. khim. 37 no.8:1748-1757 Ag '64. (MIRA 17:11)

APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3"

"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

S/080/62/035/008/003/009
D202/D308

AUTHORS: Ayzenfel'd, Ts.B., Buylina, L.O., Levina, L.A., and Krasil'shchikov, A.I.

TITLE: The effect of colored lacquer coatings on the electrochemical behavior of iron

PERIODICAL: Zhurnal prikladnoy khimii, v. 35, no. 8, 1962, 1759 - 1765

TEXT: The mechanism of the protection of iron by 10 different coatings was studied by means of taking the polarization curves of unpainted and lacquered specimens. Comparison of the stationary potentials of lacquered and unpainted electrodes showed that the largest positive shift in potential was caused by coatings possessing high adhesive properties, e.g. a phosphating primer, bakelite lacquer and epoxide materials. If their protecting properties consisted only of the isolation of the metallic surface from its surroundings, the stationary potentials would remain the same for painted and bare electrodes. The energetic state of the surface is thus affected by painting. All coatings affect the anodic and cathodic

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processes; they all decrease the current density of anodic passivation and displace the cathodic polarization curves to more negative values, the first effect being more pronounced for the majority of coatings. The passivation effect depends not only on the properties of the pigments used, but also on the properties of the film-forming substances as well. There are 5 figures and 3 tables.

SUBMITTED: June 2, 1961

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BUYLO, A.L.; FILIPCHIK, V.I.

Epidemic parotitis complicated by catarrhal pancreatitis in conjunction with ancylostomiasis and secondary hypochromic anemia. Zdrav. Belor 5 no.3:60 Mr '59. (MIRA 12:7)

1. Iz voyennogo gospitalya (nachal'nik gospitalya Ya. I. Chernilovskiy)
(MUMPS)

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BUYLO, A.L.; FILIPCHIK, V.I. (Minsk)

Clinical aspects of epidemic parotitis. Kaz. med. zhur. no.5:76 S-O '61. (MIRA 15:3)

(MUMPS)

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TYURYAYEV, I. Ya.; TSAYLINGOL'D, A.L.; BUYLOV, A.B.

Inhomogeneity of a fluidized catalyst bed. Khim.prom. no.5:356-359 My '61. (MIRA 14:6)

1. Nauchno-issledovatel'skiy institut monomerov dlya SK.
(Catalysts) (Fluidization)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

TYURYAYEV, I.Ya.; BUYLOV, A.B.

Investigation and design of sieve gratings for sectioning reactors with a fluid-bed catalyst. Zhur.prikl.khim. 35 no.10: 2224-2231 O '62. (MIRA 15:12)

1. Nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka.
(Chemical reactors) (Fluidization)

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TYURYAYEV, I.Ya.; TSAYLINGOL'D, A.L.; BUYLOV, A.B.

Gas stirring efficiency in a reactor with a fluidized bed consisting of a fine-grained catalyst. Zhur.prikl.khim. 34 no.3: 558-564 Mr '61. (MIRA 14:5)

1. Yaroslavskiy nauchno-issledovatel'skiy institut monomerov dlya sinteticheskogo kauchuka.
(Fluidization)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYLOV, A.B.; TYURYAYEV, I.Ya.

Effectiveness of sectionalizing particle-mixing apparatus with a fluidized bed. Zhur. prikl. khim. 36 no.5:1028-1032 My '63. (MIRA 16:8)

(Fluidization) (Mixing)

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"APPROVED FOR RELEASE: 06/09/2000 CIA-RDP86-00513R000307810018-3

BUYIOV, A.B.; TYURYAYEV, I.Ya.

Determination of the size of rarefied zones under sectionalizing grids. Zhur. prikl. khim. 37 no.8:1846-1849 Ag '64. (MIRA 17:11)

1. Nauchno-issledovatel'skiy institut [illegible] aviatsionnogo kauchuka.

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25(1) SOV/105-59-8-27/28

AUTHORS: Bron, O. B., Professor, Doctor of Technical Sciences, Buylov, A. V., Engineer, Bulgakov, V. A. Docent

TITLE: P. V. Sakharov. Technology of Electric Apparatus Engineering. 2. Revised Edition. Part 1, 420 Pages, Price 7.85 Rubles, Gosenergoizdat Publishing House, 1956. Part 2, 408 Pages, Price 9.25 Rubles, Gosenergoizdat Publishing House, 1957

PERIODICAL: Elektrichestvo, 1959, Nr 8, p 96 (USSR)

ABSTRACT: The first edition of this book was published in 1950 and was the first publication on the technology of electric apparatus engineering in the USSR and abroad. It was compiled on the basis of data collected by the author during his activity in the Khar'kovskiy elektromekhanicheskiy zavod (Khar'kov Electromechanical Works), during his teaching activity at the MEI, where he has lectured on the "Technology of the Manufacture of Electric Apparatus" from 1939 till now, and during three stays in foreign countries. The book was translated into Chinese, Hungarian, Polish, Bulgarian and Czech. It treats not only of the technology but also of the fundamentals of apparatus designing of individual element groups and parts. The book

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P. V. Sakharov. Technology of Electric Apparatus Engineering. 2. Revised Edition. Part 1, 420 Pages, Price 7.85 Rubles, Gosenergoizdat Publishing House, 1956. Part 2, 408 Pages, Price 9.25 Rubles, Gosenergoizdat Publishing House, 1957

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contains a systematic classification of the material on the technological processes of the manufacture of several thousand parts and element groups. An analysis of the solutions of designing and technological problems is included.

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